

Mapping a Green Recovery

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Executive Summary

As leaders scramble to help their countries recover from the devastating social and economic impact of the COVID-19 pandemic, there is a risk that these leaders may lose sight of the countries’ need to become more sustainable under the U.N. Sustainable Development Goals (SDGs). Various international organizations and leaders have called upon countries to implement a “green” recovery by focusing not only on measures that can grow the economy and create jobs, but also on measures that can do so sustainably through investments in clean energy and sustainable infrastructure.

This Note will introduce the concept of a “green” recovery and will discuss how the U.N. Sustainable Development Goals can help guide countries to restart their economies sustainably. It will particularly focus on SDGs related to climate change and how implementing certain “green” recovery measures can help prevent a rebound in greenhouse gas emissions. It will highlight the best practices for “greening” a recovery response and will use SDGs 8, 9, 11, and 13 to analyze green measures proposed or implemented by Canada, Chile, the European Union, Nigeria, South Korea, and the United States of America.

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Introduction¹

The COVID-19 pandemic has had a significant effect on the global economy. The June 2020 IMF World Economic Outlook Report forecasts that the pandemic caused a 4.9% decrease in global GDP.² Governments are scrambling to propose stimulus measures to limit the economic impact of the coronavirus on their countries and on their economies.³ The pandemic, however, did not erase the climate emergency the world is facing. Hurricanes, tropical storms, and devastating fires raged while people were locked in their homes, sheltering from COVID-19. Although the pandemic did lead to a decline in fossil fuel use,⁴ research of reductions in greenhouse gas (GHG) emissions during previous economic crises show that these reductions are temporary.⁵ GHG emissions historically rebound once a crisis ends because governments invest in fossil fuel dependent industries to rebuild their economies.⁶ With this in mind, the United Nations (U.N.) has pressured governments “to build back better” in their recovery responses to the COVID-19 pandemic.⁷

This Note aims to analyze the “green” recovery measures countries have proposed in response to COVID-19 under the U.N. Sustainable Development Goals (SDGs) on climate change and considers what the best green practices are. Firstly, it will discuss the SDGs and identify specific goals and targets that will form the legal framework for the analysis. It will then discuss what constitutes a “green” or sustainable recovery and the possible measures and policies governments can implement to achieve a green recovery. Lastly, this Note will analyze the COVID-19 recovery measures proposed by Canada, Chile, the European Union, Nigeria, South Korea, and the United States of America that meet the identified SDG targets and highlight the challenges in implementing green recovery measures globally.

1. This Note was developed as a report for the Cornell Law and Development Research Seminar, in partnership with the Center for International Sustainable Development Law (CISDL). I would like to acknowledge and thank Dr. Chantal Thomas of Cornell Law School and Dr. Alexandra Harrington of CISDL for their guidance and support during the writing process. Please note that this Note does not reflect any developments post-January 31, 2021.

2. IMF, *A Crisis Like No Other, An Uncertain Recovery*, WORLD ECONOMIC OUTLOOK UPDATE, JUNE 2020, at 1, <https://www.imf.org/en/Publications/WEO/Issues/2020/06/24/WEOUpdateJune2020>.

3. See *Policy Responses to COVID-19*, IMF, <https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19> (last visited Oct. 1, 2020) (tracking countries’ policy responses to COVID-19).

4. See Cameron Hepburn et al., *Will COVID-19 Fiscal Recovery Packages Accelerate or Retard Progress on Climate Change?* at 4 (Oxford Rev. Econ. Pol’y, Working Paper No. 20-02, May 4, 2020).

5. See *id.* at 6 n.4.

6. See *id.*

7. U.N. Dep’t Glob. Comm’n, *Climate Change and COVID-19: U.N. urges nations to ‘recover better’* (Apr. 22, 2020), <https://www.un.org/en/un-coronavirus-communications-team/un-urges-countries-build-back-better> [<https://perma.cc/TR56-BCW7>].

I. U.N. Sustainable Development Goals (SDGs)

A. SDGs and Soft Law

The United Nations Sustainable Development Goals (SDGs) are a set of seventeen goals with individual targets that U.N. Member states adopted in 2015 as a part of the 2030 Agenda for Sustainable Development. The SDGs are a “universal call to action to end poverty, protect the planet, and improve the lives and prospects of everyone, everywhere.”⁸ Member States are expected to implement the SDGs in their own policies, regulations, and investments. Member States are also encouraged to conduct Voluntary National Reviews (VNRs), which are “regular and inclusive reviews of progress at the national and sub-national levels,” under the 2030 Agenda for Sustainable Development and to report them to the high-level political forum under the U.N. Framework Convention on Climate Change (UNFCCC).⁹

The SDGs are a form of international “soft law.” This means that they are not binding and, thus, are not legally enforceable. They are, essentially, “goals” toward which countries should aim in their policies and regulations.¹⁰ Because SDGs are soft law, countries can mold their policies to respond to domestic situations without “violating” the SDGs.¹¹ As a result, Member States can adapt their policies and regulations to incorporate their response to COVID-19 and update their VNRs to reflect the circumstantial changes.¹² A notable aspect of soft law, however, is the lack of international enforcement mechanisms. In other words, countries’ leaders must take the initiative to implement sustainability-focused policies and regulations. Domestic legislation and policies are therefore the primary enforcement mechanisms for implementing the SDGs.¹³ Situations like COVID-19 could thus result in countries only focusing on short-term, unsustainable solutions to boost their economies quickly, while ignoring their plans for sustainable development outlined in their Nationally Determined Contributions (NDCs) under the Paris Agreement.

B. Green Recovery SDG Targets

Each of the seventeen SDGs has multiple targets that set guidelines for

8. U.N., *17 Goals for People, for Planet*, SUSTAINABLE DEV. GOALS, <https://www.un.org/sustainabledevelopment/development-agenda/> [<https://perma.cc/F4YQ-W3Y7>] (last visited Nov. 21, 2020).

9. U.N. Dep’t Econ. & Soc. Aff., *Voluntary National Reviews Database*, HIGH-LEVEL POL. F. ON SUSTAINABLE DEV., <https://sustainabledevelopment.un.org/vnrs/> [<https://perma.cc/45MR-A7WV>] (last visited Nov. 21, 2020).

10. See Marcel Brus, *Soft Law in Public International Law: a Pragmatic or a Principled Choice? Comparing the Sustainable Development Goals and the Paris Agreement*, in *LEGAL VALIDITY AND SOFT LAW*, 243-66, 249 (Pauline Westerman et al., eds., 2018), <https://ssrn.com/abstract=2945942> [<https://perma.cc/GC4B-EXBJ>].

11. See *id.* at 251.

12. See *id.* at 254-55.

13. See *id.* at 259.

what countries should focus on under each SDG.¹⁴ The pandemic has raised several concerns that show the need to incorporate policies reflecting all of the SDGs. For example, the SDGs focused on healthcare and poverty are particularly important at this time. This study’s scope is limited, however, to six SDGs that relate to using a “green” recovery to revitalize economies. The specific targets are, therefore, considered in the context of countries’ COVID-19 recovery responses and the common goal of a low-emission recovery and green job creation. The targets were selected based on a realistic expectation of what countries can incorporate and have proposed to incorporate at this time.

The six SDGs and their targets considered in this study are:

<p>Goal 7:</p>  <p>Affordable & Clean Energy¹⁵</p>	<p>7.1. By 2030, ensure universal access to affordable, reliable, and modern energy services</p> <p>7.2. By 2030, increase substantially the share of renewable energy in the global energy mix</p>
<p>Goal 8:</p>  <p>Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all¹⁶</p>	<p>8.1 Sustain per capita economic growth in accordance with national circumstances and, in particular, at least 7 per cent gross domestic product growth per annum in the least developed countries</p> <p>8.2 Achieve higher levels of economic productivity through diversification, technological upgrading and innovation, including through a focus on high-value added and labor-intensive sectors</p> <p>8.4 Improve progressively, through 2030, global resource efficiency in consumption and production and endeavor to decouple economic growth from environmental degradation, in accordance with the 10-year framework of programs on sustainable consumption and production, with developed countries taking the lead</p>

14. See generally U.N. Dep’t Econ. & Soc. Aff., *The 17 Goals*, SUSTAINABLE DEV. GOALS, <https://sdgs.un.org/goals> [<https://perma.cc/S2AU-AXFK>] (listing the 17 SDGs and their targets).

15. Goal 7 Targets and Indicators, U.N. DEP’T OF ECON. AND SOC. AFF., <https://sdgs.un.org/goals/goal7>.

16. Goal 8 Targets and Indicators, U.N. DEP’T OF ECON. AND SOC. AFF., <https://sdgs.un.org/goals/goal8>.

<p>Goal 9:</p>  <p>Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation¹⁷</p>	<p>9.1 Develop quality, reliable, sustainable, and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all</p> <p>9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities</p>
<p>Goal 11:</p>  <p>Make cities and human settlements inclusive, sustainable, safe, and resilient¹⁸</p>	<p>11.2 By 2030, provide access to safe, affordable, accessible, and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons</p> <p>11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management</p>
<p>Goal 13:</p>  <p>Take urgent action to combat climate change and its impacts¹⁹</p>	<p>13.2 Integrate climate change measures into national policies, strategies, and planning</p> <p>13.b Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities; Acknowledging that the United Nations Framework Convention on Climate Change is the primary international, intergovernmental forum for negotiating the global response to climate change.</p>
<p>Goal 16:</p>  <p>Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable, and inclusive institutions at all levels²⁰</p>	<p>16.6 Develop effective, accountable, and transparent institutions at all levels</p> <p>16.b Promote and enforce non-discriminatory laws and policies for sustainable development</p>

17. Goal 9 Targets and Indicators, U.N. DEP'T OF ECON. AND SOC. AFF., <https://sdgs.un.org/goals/goal9>.

18. Goal 11 Targets and Indicators, U.N. DEP'T OF ECON. AND SOC. AFF., <https://sdgs.un.org/goals/goal11>.

19. Goal 13 Targets and Indicators, U.N. DEP'T OF ECON. AND SOC. AFF., <https://sdgs.un.org/goals/goal13>.

20. Goal 16 Targets and Indicators, U.N. DEP'T OF ECON. AND SOC. AFF., <https://sdgs.un.org/goals/goal16>.

II. Implementing a Green Recovery to the COVID-19 Pandemic

A. What is a Green Recovery?

Many global leaders, NGOs, and civil society organizations have called for countries' leaders to implement a "green" recovery.²¹ A green recovery means incorporating "policies and measures to stimulate short-run economic activity while at the same time preserving, protecting and enhancing environmental and natural resource quality both near-term and long-term" into countries' COVID-19 economic recovery responses.²² Experts suggest that GHG emissions may decrease by 8% in 2020 because carbon dioxide (CO₂) emissions fell during the pandemic.²³ If countries' recovery measures follow the historical pattern of investment in high-carbon producing industries, however, CO₂ emissions will rebound.²⁴ If they rebound, there will be a predicted 3°C (37.4°F) increase in global temperature by 2030, making it impossible to meet the goals articulated in the 2015 UNFCCC Paris Agreement on climate change (which is incorporated by reference into SDG 13).²⁵

Similar to the current decrease in CO₂ emissions, the 2020 Sustainable Development Outlook found that global CO₂ emissions initially declined by 400 million tons in 2009 following the Global Financial Crisis (GFC) but then rebounded by 1.7 billion tons in 2010.²⁶ This rebound was attributable to countries investing in high-carbon producing industries after the GFC to stimulate their economies, which drastically increased GHG emissions.²⁷ If countries are to meet the Paris Agreement goal of limiting global warming to below 1.5°C (34.7°F), 7.6% of global emissions will need to be cut from 2020–2030.²⁸ A Carbon Brief study proposes that strong green recovery measures to the COVID-19 pandemic will limit carbon emissions

21. See, e.g., U.N. Dep't Glob. Comm'n., *supra* note 7 (U.N. Secretary General urging countries to "build back better"); U.N. Framework Convention on Climate Change, Global Comm'n on Adaption, *Call to Action for a Climate-Resilient Recovery from COVID-19* (July 9, 2020), <https://unfccc.int/news/call-to-action-for-a-climate-resilient-recovery-from-covid-19> [<https://perma.cc/T62G-RKP7>] ("The Global Commission on Adaption calls on world leaders to incorporate climate resilience into [their] economic recovery packages"). European Commission Press Release IP 14/04, Launch of European Alliance for a Green Recovery (Apr. 14, 2020) (reporting that "180 political decision-makers, business leaders, trade unions, NGOs, and think tanks" have committed to a green recovery).

22. Shardul Agrawala et al., *What Policies for Greening the Crisis Response and Economic Recovery? Lessons Learned from Past Green Stimulus Measures and Implications for the COVID-19 Crisis* 12 (OECD Env't Working Papers No. 164, May 12, 2020).

23. Hepburn, *supra* note 4, at 5.

24. *Id.* at 6.

25. *Id.* at 7.

26. U.N. DEP'T ECON. & SOC. AFF., SUSTAINABLE DEVELOPMENT OUTLOOK 2020, ACHIEVING SDGS IN THE WAKE OF COVID-19: SCENARIOS FOR POLICYMAKERS 35 (July 13, 2020), https://sdgs.un.org/sites/default/files/2020-07/SDO2020_Book.pdf [hereinafter SDO 2020] [<https://perma.cc/69J2-CZEX>].

27. See Hepburn, *supra* note 4, at 6 n.4.

28. *Id.* at 6.

and keep the rise in global temperature to less than 1.5°C by 2030.²⁹ With a “business-as-usual” fossil-fuel-based approach, however, the global temperature is predicted to rise above 1.8°C (35.2°F) by 2050.³⁰

Experts argue that a green recovery response to the COVID-19 pandemic will not only stop a rebound in GHG emissions, but will also present countries with new opportunities for sustainable innovation, investment, and job creation.³¹ The Sustainable Development Outlook predicts that countries can deliver \$26 trillion to the global economy and generate over 65 million additional low-carbon jobs by 2030 if they invest in clean energy systems, sustainable land-use, and a circular industrial economy.³² Thus, COVID-19 presents an invaluable opportunity for governments to implement green policies because countries are going to be investing large sums of money on economic recovery already.³³

The U.N. Secretary General highlighted six climate-related actions that governments should implement to shape their recovery:

First, the huge amounts of money to be spent on recovery from the coronavirus must deliver new jobs and businesses through a clean, green transition. Second, where taxpayers’ money is used to rescue businesses, it must be tied to achieving green jobs and sustainable growth. Third, fiscal firepower must drive a shift from the grey to green economy, empowering societies and people to be more resilient. Fourth, public funds should be used to invest in the future, not the past, and flow to sustainable sectors and projects that help the environment and the climate. Fossil fuel subsidies must end, and polluters must start paying for their pollution. Fifth, climate risks and opportunities must be incorporated into the financial system as well as all aspects of public policy making and infrastructure. Sixth, all need to work together as an international community.³⁴

Investment in a green recovery will help countries meet the SDG targets and their own NDCs, as countries implementing greener policies will essentially be investing in a recovery that will have long-term sustainability effects.³⁵

29. Josh Gabbatiss, *Coronavirus: Green Recovery ‘Could Prevent 0.3C’ of Warming by 2050*, CARBON BRIEF (Aug. 7, 2020, 10:00 AM), <https://www.carbonbrief.org/coronavirus-green-recovery-could-prevent-0-3c-of-warming-by-2050> [https://perma.cc/6YF5-CQTK]

30. *Id.*

31. *Cf.* Agrawala, *supra* note 16, at 12 (stating that incorporating environmental aspects into fiscal stimulus measures will have co-benefits).

32. SDO 2020, *supra* note 20, at 25.

33. *Cf.* Helen Mountford, *Can low-carbon investments help economies recover from coronavirus?*, WORLD ECON. F. (Mar. 17, 2020), <https://www.weforum.org/agenda/2020/03/coronavirus-low-carbon-investments-economies-recovery-climate-change> [https://perma.cc/APM4-SP3J] (claiming that it would not make sense to respond to the short-term economic downturn by making bad long-term investments).

34. U.N. Dep’t Glob. Commc’n, *supra* note 7.

35. See U.N., *The Sustainable Development Goals: Our Framework for COVID-19 Recovery*, SUSTAINABLE DEVELOPMENT GOALS, <https://www.un.org/sustainabledevelopment/sdgs-framework-for-covid-19-recovery/> [https://perma.cc/3QBX-DNNE].

B. Best Practices for Greening the COVID-19 Response

Green stimulus measures can either be direct (targeted at green activities and commodities) or indirect (managed through price mechanisms like tax cuts).³⁶ Successful green recovery packages will have a combination of both. Due to the COVID-19 pandemic, the nature and timing of the measures will need to be carefully chosen because the short-term aims of current fiscal measures at this time should be on stabilizing the economy and healthcare systems. Green measures generally have more medium-and long-term effects and should therefore be incorporated into a country's second response level after the emergency stimulus has been deployed.³⁷

The OECD has proposed several pre-recovery-instrument support measures for governments to employ in their initial plans to support a low-carbon transition in the medium-term.³⁸ Firstly, they hold that governments should avoid weakening climate policies when trying to bail out firms. Environmental regulations need to be maintained to provide more certainty and long-term stability for a low-carbon transition.³⁹ Secondly, the OECD suggests that governments should make direct support to firms contingent on environmental improvements, thereby steering development towards low-carbon production modes and emissions reductions in the long-term.⁴⁰

Multiple studies have been conducted analyzing which green measures would be most effective in recovery instruments for both revitalizing the economy and mitigating climate change, with all seemingly agreeing on the five below.⁴¹ Once countries have reached their second level of recovery measures, the following are some of the best practices that countries can incorporate for a green recovery:

Decarbonizing / renewable energy: The COVID-19 crisis presents the opportunity for governments to move away from reliance on coal and to utilize renewable energy instead.⁴² The cost of renewables energy generation, such as solar and wind power, is now competitive, making it a more affordable energy solution.⁴³ The International Energy Agency estimates that every dollar a country spends on Solar PV as part of an economic recovery

36. Agrawala, *supra* note 16, at 12.

37. *Id.* at 12-13.

38. OECD, *COVID-19 and the Low-Carbon Transition. Impacts and Possible Policy Responses*, TACKLING CORONAVIRUS (COVID-19): CONTRIBUTING TO A GLOBAL EFFORT, 4-5 (June 26, 2020).

39. *Id.* at 4.

40. *Id.* at 5.

41. See, e.g., Agrawala, *supra* note 16 at 17, 20, 22, 23 (analyzing green measures implemented in response to the Global Financial Crisis); Hepburn, *supra* note 4 at 369-70 (analyzing whether recovery measures will accelerate climate change); SDO 2020, *supra* note 20, at 17 (analyzing how different recovery scenarios will affect sustainable development globally).

42. SDO 2020, *supra* note 20, at 37.

43. *Id.*

stimulus will create twice as many jobs as a dollar invested in coal or gas.⁴⁴ Furthermore, investment in clean energy production offers high returns in the long term because it drives down the clean energy transition cost⁴⁵ and has a high expected GHG reduction rate.⁴⁶ Decarbonizing energy can take the form of transitioning to renewable energy, such as solar or wind power, or the form of building smart grids, which can help realize the potential of solar and wind energy, or developing new zero-emission fuels, such as hydrogen fuel.⁴⁷

Building Efficiency / Energy Efficient Retrofits: Energy inefficient infrastructure can create a lock-in effect, which causes countries to have high levels of GHG emissions for longer periods.⁴⁸ By installing energy efficient heating, ventilation, smart meters, and LED lighting, governments can reduce levels of energy consumption.⁴⁹ Retrofits are also quite labor-intensive and therefore have the potential to create more jobs in the short term, compared to some of the other green measures.⁵⁰ Retrofitting existing inefficient energy infrastructure therefore affords high short-term economic growth, as well as a medium reduction in GHG emissions.⁵¹

Sustainable Transportation: Investing in electric vehicles (EV) or increasing low-emission public transportation is an important tool for lowering dependence on fossil fuels.⁵² This includes measures like expanding EV charging networks, creating bus transit and urban rail networks (which may pose some safety challenges in the COVID-19 environment⁵³), increasing EV manufacturing, developing infrastructure for active transport (like bicycles), and investing in R&D for alternative fuel sources, such as hydrogen.⁵⁴ The key challenge for the production of EVs, however, is to ensure that the power upon which the EVs are dependent is not fossil-fuel based, like coal-generated electricity. The EVs should instead be powered through renewable electricity generation or batteries that have an emissions-reducing effect.⁵⁵

44. Yamide Dagnet & Joel Jaeger, *Not Enough Action in Stimulus Plans*, WORLD RES. INST. (Sept. 15, 2020), <https://www.wri.org/blog/2020/09/coronavirus-green-economic-recovery>. *But see* Agrawala, *supra* note 16, at 15 (stating that direct employment effects is often less because renewable energy projects don't necessarily lead to increased domestic manufacturing, but increased imports of equipment).

45. Hepburn, *supra* note 4, at 366.

46. *See* Agrawala, *supra* note 16 at 13.

47. *See* SDO 2020, *supra* note 20, at 38.

48. Agrawala, *supra* note 16, at 17.

49. *Id.* at 19; *see, e.g.*, Benjamin Freas, *Retrofits Are Key to an Energy Efficient Building Stock*, FORBES (Apr. 13, 2016), <https://www.forbes.com/sites/pikerresearch/2016/04/13/energy-efficient-building/?sh=641a263848f8> [<https://perma.cc/HGY6-JY3P>] (discussing how retrofits can increase energy efficiency).

50. Agrawala, *supra* note 16, at 19.

51. *Id.* at 13.

52. *See* Agrawala, *supra* note 16, at 23-24; SDO 2020, *supra* note 24, at 39.

53. *See* OECD, *supra* note 32, at 9.

54. *See* Agrawala, *supra* note 16, at 12.

55. *See* SDO 2020, *supra* note 20, at 39.

Carbon Capture, Utilization, and Storage (CCUS): CCUS involves capturing CO₂ from fuel combustion, transporting the captured CO₂, and using it as a resource or storing it permanently deep underground.⁵⁶ This process also provides the foundation for “negative emissions” when the CO₂ is captured directly from the atmosphere. CCUS is still quite a new development that requires more regulation and R&D to be fully utilized, making it difficult for developing countries to incorporate.⁵⁷

Greening Finance: Greening finance is the increasing of private and public investment in sustainable development.⁵⁸ The aim of greening finance is not only to better manage private sector environmental and social risks, but also to ensure more accountability.⁵⁹ Countries can achieve this goal through tax credits and subsidies, conditional loans and grants, carbon pricing, direct government spending, and regulations imposed for sustainable development and R&D.⁶⁰

III. Green Responses to COVID-19

This section will outline the recovery plans introduced by Canada, Chile, the EU, Nigeria, South Korea, and the United States of America and will compare their measures to the designated SDGs. Although there is a need for green legislation, regulations, and policies, the COVID-19 recovery plans countries have proposed do not generally take the form of an enforceable legal instrument at this early stage. Instead, the plans outline certain policies the governments propose to introduce and the industries and infrastructure projects in which they propose to invest their economic recovery funds and their 2021 budgets. In their plans, some countries also propose to draft legislation and regulations by a set deadline to bolster their sustainability effort once the direct economic impact of the pandemic has been mitigated.

It is worth noting that because this Note has a climate change focus, it does not analyze other relevant recovery measures the countries have proposed that meet the SDGs. Furthermore, the COVID-19 pandemic is still ongoing, therefore countries must continuously adapt to the rapidly changing environment. Thus, one of the central challenges in analyzing countries' responses is understanding that any proposals can change and that the primary focus of the countries' leaders at this time is on controlling the pandemic and ensuring the health of their citizens and not on climate change.

56. *Carbon Capture, Utilisation and Storage*, INT'L ENERGY AGENCY, <https://www.iea.org/fuels-and-technologies/carbon-capture-utilisation-and-storage> [https://perma.cc/YXZ5-YRNA] (last updated Nov. 5, 2020).

57. See SDO 2020, *supra* note 20, at 39.

58. See *Green Financing*, U.N. ENV'T PROGRAMME, <https://www.unenvironment.org/regions/asia-and-pacific/regional-initiatives/supporting-resource-efficiency/green-financing> [https://perma.cc/A2EM-WYDW] (last visited Nov. 21, 2020).

59. See *id.*

60. See SDO 2020, *supra* note 20, at 39.

A. Canada

On October 1, 2020, the Canadian government announced a CAD “\$10 billion (USD \$7.5 billion) Investment Plan to Grow the Economy and Create Jobs” over three years, funded through the Canada Infrastructure Bank (CIB), to support its recovery from COVID-19.⁶¹ At least CAD \$6 billion (USD \$4.5 billion) of the CIB investments have been assigned to green projects.⁶² The Canadian government established CIB in 2017 to invest in revenue-generating infrastructure projects that are “in the public interest”.⁶³ The CIB Growth Plan is expected to create 60,000 jobs across the country.⁶⁴ The plan proposes five key projects for investment, of which three are sustainability-focused and highlighted below.

CIB will invest CAD \$2.5 billion in clean power generation, transmission, and storage, which will include renewable power generation and investment in inter-provincial and territorial transmission.⁶⁵ CIB will structure its investments in clean power generation to shift the construction and operations risk to the private sector in order to mitigate financing challenges and gaps in the capital structure that usually delay clean power projects in the country.⁶⁶

CIB will also invest CAD \$1.5 billion in zero-transmission buses, which will contribute to the government’s goal of 5000 zero-emission school and transit buses over the next five years.⁶⁷ CIB proposes to finance the high upfront cost differential of the zero-emission buses, compared to other higher polluting buses, to create long-term operating savings. Lastly, CIB will invest CAD \$2 billion in the upfront capital costs of energy-efficient building retrofits.⁶⁸ Energy efficiency is a key priority in the Canadian climate plan because heating and cooling buildings accounts for 12% of Canada’s GHG emissions.⁶⁹

Additionally, the Canadian Minister of Natural Resources launched a CAD \$750 million (USD \$573 million) Emissions Reduction Fund on October 29, 2020, to reduce methane and GHG emissions.⁷⁰ The fund

61. See Simon Evans & Charles Gabbatiss, *Coronavirus: Tracking How the World’s ‘Green Recovery’ Plans Aim to Cut Emissions*, CARBON BRIEF, <https://www.carbonbrief.org/coronavirus-tracking-how-the-worlds-green-recovery-plans-aim-to-cut-emissions> [https://perma.cc/6U95-98NM] (last updated Oct. 7, 2020).

62. *Id.*

63. See Can. Infrastructure Bank, *\$10B Investment Plan to Grow the Economy and Create Jobs*, CANADA INFRASTRUCTURE BANK’S GROWTH PLAN BACKGROUNDER 4 (Oct. 1, 2020) [hereinafter CIB Growth Plan].

64. See *id.* at 1.

65. *Id.*

66. *Id.*

67. See *id.* at 2-3.

68. See *id.* at 3.

69. *Id.*

70. News Release, Nat. Res. Can., Minister O’Regan Launches a \$750-Million Fund for Oil and Gas Companies to Reduce Methane Emissions (Oct. 29, 2020), <https://www.canada.ca/en/natural-resources-canada/news/2020/10/minister-oregan-launches-750-million-fund-for-oil-and-gas-companies-to-reduce-methane-emissions.html> [https://perma.cc/XT38-TAMG].

primarily provides repayable funding to eligible oil and gas firms to support their efforts to reduce GHG emissions by adopting greener technologies and to maintain jobs.⁷¹ The government also included a requirement in the COVID-19 Economic Response Plan that large employers who receive support from the government must publish annual climate-related financial disclosure reports and contribute to Canada's NDC, 2050 net-zero target, and Paris Agreement commitments.⁷²

In September 2020, the Canadian government announced that it will bring forward a plan to exceed Canada's 2030 climate goal and to legislate Canada's goal of net-zero emissions by 2050.⁷³ As a part of this plan, the government will launch a Clean Power Fund that will connect surplus clean power to regions transitioning away from coal and will support investments in renewable energy.⁷⁴ Additionally, the legislature will modernize the Canadian Environmental Protection Act and the government will ban single-use plastics in 2021.⁷⁵

SDGs	Recovery Projects
UNSDG7: Affordable and Clean Energy	CIB: CAD \$2.5 billion in clean power generation, transmission & storage; Aims to invest \$5 billion in medium term
UNSDG8: Sustained, Inclusive, and Sustainable Economic Growth	CIB: expected to create 60 000 jobs; Direct Funding: 5200 jobs cleaning up orphan and inactive gas wells
UNSDG9: Resilient Infrastructure and Sustainable Industrialization	CIB: CAD \$2 billion in energy efficient retrofits
UNSDG11: Sustainable Cities	CIB: CAD 1.5 billion for zero-emission buses; goal of 5000 buses in the next 5 years
UNSDG13: Combat Climate Change	Emission Reduction Fund: CAD \$750 million in emissions reduction for oil and gas sector; CAD \$1.72 billion in cleaning up former oil and gas wells
UNSDG16: Effective and Accountable Institutions	Large employers must publish annual climate-related financial disclosures; CIB Clean Power Project: Investment structure tailored to ensure projects will be developed; CIB: Investment in due diligence

The CIB Growth Plan is the primary driver of Canada's green response. The government's COVID-19 Economic Recovery Plan is more focused on helping affected individuals and businesses.⁷⁶ The CIB Growth Plan meets all of the climate-focused SDGs, with an emphasis on transport

71. *Id.*

72. See Can. Current Policy Projections, CLIMATE ACTION TRACKER, <https://climateactiontracker.org/countries/canada/current-policy-projections/> [<https://perma.cc/4X6M-9B32>] (last updated Nov. 21, 2020) [hereinafter CAT Canada].

73. See Julie Payette, Governor General, Canada, Speech from the Throne (Sept. 23, 2020), <https://www.canada.ca/en/privy-council/campaigns/speech-throne/2020/speech-from-the-throne.html> [<https://perma.cc/D956-6N8W>].

74. See *id.*

75. *Id.*

76. Cf. CAT Canada, *supra* note 66 ("The \$200+ billion Plan is largely focused on helping affected individuals and businesses address the immediate health and economic impacts of the pandemic").

and reducing emissions. Canada's oil and gas sector is the largest GHG emitter in the country and thus should be its primary focus for a green recovery. Canada has tried to transition this sector through the proposed Emissions Reduction Fund, which targets the oil and gas sector specifically.⁷⁷ Notably, the COVID-19 Economic Response Plan does include a requirement that large corporations publish an annual climate-related disclosure report.⁷⁸ This requirement incorporates SDG 16 because it imposes accountability and transparency on corporations that may have environmentally harmful practices. The requirement essentially forces corporations to self-regulate and to invest in greener operating systems.

The Economic Response Plan also includes CAD \$1.72 billion to clean up orphan and inactive oil and gas wells, but environmental groups have cautioned that this could undermine the "polluters pay" principle if the government gives the funds to the corporations in the form of grants rather than loans.⁷⁹ In the same vein, a number of civil society groups have urged the government to attach "green-strings" to recovery measures to ensure that any financial support from the government be conditional on developing plans for a transition to a net-zero economy.⁸⁰

B. Chile

Chile has announced its "step-by-step Chile Recovers" recovery plan, which aims to "lift" and "restart" the country through four recovery pillars: employment incentives, investment as a job generator, support for SMEs, and streamlining and simplifying permits.⁸¹ The public investment plan, which adds an additional USD \$4.5 billion on top of its regular budget, has the object of boosting economic activity and job creation over the next twenty-four months.⁸² 30% of the projects in the public investment plan will contribute to accelerating Chile's transition towards sustainable development and mitigating climate change.⁸³ The Chilean government has based its sustainability projects on the Climate Bond Initiative and Chile's updated NDC. Overall, Chile has proposed ten sustainability projects, mostly focused on water, agriculture, and construction.⁸⁴

Among these projects, the government plans to build 42 new drinking water systems for 4200 rural families and to construct, replace, and

77. See CAT Canada, *supra* note 66.

78. *Id.*

79. See *id.*

80. *Id.*

81. See Ministry of Commc'ns, Gov't of Chile, *Paso a Paso Chile se Recupera*, <https://www.gob.cl/chileserecupera/> [https://perma.cc/N7YZ-6KUT] (last visited Nov. 22, 2020).

82. See Ministry of Commc'ns, Gov't of Chile, *Paso a Paso Chile se Recupera: Inversión Pública*, <https://www.gob.cl/chileserecupera/inversion/> [https://perma.cc/JKK9-CGRW] (last visited Nov. 22, 2020) [hereinafter *Inversión Pública*].

83. *Id.*

84. See Ministry of Commc'ns, Gov't of Chile, *Paso a Paso Chile se Recupera: Sustentabilidad de los proyectos*, <https://www.gob.cl/chileserecupera/sustentabilidad/> [https://perma.cc/5BD6-2VMR] (last visited Nov. 22, 2020) [hereinafter *Sustentabilidad de los proyectos*].

improve 150 bridges, with the effects of climate change in mind.⁸⁵ Furthermore, it plans to invest USD \$3 billion between 2020 and 2022 to extend the metro, railways, electric buses, public transport routes, and bicycle lanes, with the object of promoting clean public transportation and reducing GHG emissions.⁸⁶ The plan also proposes to install thermal conditioning, creating energy efficiency in homes.⁸⁷ Overall, the government holds that its public investment plan will generate a total of 250,000 jobs.⁸⁸

Under the third pillar of the Recovery Plan, Chile aims to streamline and simplify the permit process, on the recommendation of the National Productivity Commission, through implementing an agenda of thirteen administrative and fifteen management measures to modernize the process and to eliminate bureaucracy.⁸⁹

On November 3, 2020, the Chilean government presented a national strategy to convert Chile into a global leader in green hydrogen by 2040.⁹⁰ The Energy Minister suggested that this action plan will create 100,000 jobs and invest USD \$200 billion over the next 20 years. Chile's Green Hydrogen Strategy has three main objectives: to produce the cheapest green hydrogen by 2030, be among three leading exporters by 2040, and have 5GW of electrolysis capacity under development by 2025.⁹¹ Two task forces will implement it: one to guide permit processing and the implementation of pilot projects and the other to position Chile internationally.⁹²

SDGs	Recovery Projects
UNSDG7: Affordable and Clean Energy	Green Hydrogen Strategy
UNSDG8: Sustained, Inclusive, and Sustainable Economic Growth	Public Investment Plan: 250 000 jobs; Green Hydrogen Strategy: 100 000 jobs
UNSDG9: Resilient Infrastructure and Sustainable Industrialization	Construction, replacement, and improvement of 150 bridges; thermal conditioning and energy efficient retrofits
UNSDG11: Sustainable Cities	USD \$3 billion in extending public transport, building 42 new water drinking systems
UNSDG13: Combat Climate Change	Sustainability Plan in Recovery Plan; formulation of a Climate Change Framework Law
UNSDG16: Effective and Accountable Institutions	Recovery Plan Pillar 3: Agenda to reduce bureaucracy through streamlining and simplifying permits

85. See *id.*

86. See *Inversión Pública*, *supra* note 76.

87. See *Sustentabilidad de los proyectos*, *supra* note 78.

88. *Id.*

89. See Ministry of Comm'ns, Gov't of Chile, *Paso a Paso Chile se Recupera: Agilización y simplificación de permisos*, <https://www.gob.cl/chileserecupera/agilizacion/> [<https://perma.cc/G6FP-GUY7>] (last visited Nov. 22, 2020) [hereinafter *Agilización y simplificación de permisos*].

90. See Press Release, The Chilean Government Presents a National Strategy to Convert Chile into a Global Leader in Green Hydrogen (Nov. 3, 2020), <https://www.gob.cl/en/news/chilean-government-presents-national-strategy-convert-chile-global-leader-green-hydrogen/> [<https://perma.cc/ZLV9-BVZR>] [hereinafter *Chile Gov't Press Release*].

91. See *id.*

92. *Id.*

Chile's recovery response to COVID-19 meets the SDG targets, but it does not match the Chilean government's updated NDC commitment to place climate action at its core.⁹³ Although Chile does have a 2050 Energy Strategy in place with long-term targets, the recovery response does not reflect these targets. Chile came forward with an updated NDC in April 2020 while other countries delayed submitting new pledges because of the pandemic. In it, Chile commits to achieving carbon neutrality by 2050 through linking climate action to sustainable development and a just energy transition.⁹⁴ The fact that Chile has submitted an updated NDC is significant to its commitment to meeting its climate action goals. Critics worry whether Chile will enforce its NDC, however, because the NDC was not reflected in Chile's recovery response. As a result, environmental activists have called Chile's recovery measures a "mixed bag" and have criticized Chile for not demonstrating any serious commitment to advancing climate action despite its pronouncements.⁹⁵

The Chilean government's announcement of the Green Hydrogen Strategy on November 3rd mitigates some of the critics' concerns, however, and shows that Chile is attempting to transition to net-zero energy production. Among the actions in the strategy, the government has dedicated USD \$50 million to finance green hydrogen projects to help investors close financing gaps and has set up a working group to accelerate green hydrogen adoption at state-owned companies and suppliers to generate internal demand.⁹⁶

C. European Union

The European Council (EC) declared that it is pursuing a fully green recovery response to COVID-19, based on the European Green New Deal (EGD) and the Sustainable Europe Investment Plan (SEIP) released in December 2019 and January 2020, respectively.⁹⁷ The EU has pledged an overall €1.85 trillion (USD \$2.19 trillion) to kickstart the economy under the twin aims of a digital and a green transition.⁹⁸ 25% of the overall EU budget will be spent on implementing the EGD as the EU's new growth instrument, emphasizing that all public investments for recovery should

93. See Evans & Gabbatiss, *supra* note 55.

94. See Francisca Tondreau, *How Climate Targets Can Help Economic Recovery*, PROJECT SYNDICATE (Sept. 24, 2020), <https://www.project-syndicate.org/commentary/climate-targets-help-economic-recovery-from-covid19-crisis-by-francisca-tondreau-2020-09> [<https://perma.cc/9Y3R-SLYK>].

95. *Id.*

96. See Chile Gov't Press Release, *supra* note 84.

97. See European Commission Press Release IP/20/1657, The Commission, President von der Leyen's State of the Union Address: Charting the Course Out of the Coronavirus Crisis and Into the Future (Sept. 16, 2020), https://ec.europa.eu/commission/presscorner/detail/en/ip_20_1657 [<https://perma.cc/XVQ7-US4Y>] [hereinafter EU State of the Union].

98. *Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of Regions, Europe's Moment: Repair and Prepare for the Next Generation*, COM (2020) 456 final, 2 (May 27, 2020) [hereinafter NGEU 2020].

respect the oath “to do no harm” to the environment.⁹⁹

The EC agreed to a €750 billion (USD \$888 billion) “Repair and Prepare for the Next Generation” (NGEU) recovery instrument on July 21, 2020, with the aim of rebuilding a “more sustainable, resilient and fairer Europe”.¹⁰⁰ The money from the NGEU recovery instrument will be invested across three pillars: support to Member states for investments and reforms to address the crisis, incentives for private investment to kick-start the economy, and efforts devoted to learning lessons from the crisis.¹⁰¹ The NGEU details sustainability projects and goals and allocates these to implementation facilities under each pillar. The NGEU will channel its first pillar investments through a Recovery and Resilience Facility (RRF) with a €560 billion budget to support member states to invest in a sustainable and green recovery.¹⁰² The RRF requires Member States to design their own tailored national recovery plans based on the investment and reform priorities identified in the NGEU, in line with National Climate and Energy Plans, Just Transition Plans, and Partnership Agreements and Operational Programs under EU funds.¹⁰³ The EC claims that the NGEU will create at least 700,000 new jobs through its sustainable investments.¹⁰⁴

Additionally, the EU Commission (Commission) proposed a 2030 Climate Target Plan in September 2020 that aims to cut GHG emissions by 55% by 2030.¹⁰⁵ The plan outlines where the highest GHG emissions are and what measures are needed in specific industries to reduce GHG emissions for that sector. The Commission also announced its intention to start preparing detailed legislative proposals on how to achieve this Plan, which it will present in June 2021.¹⁰⁶

99. *Id.* at 6.

100. *Id.*

101. *Id.* at 4-6.

102. *Id.* at 5.

103. NGEU 2020, *supra* note 92, at 5.

104. *Id.* at 6-7.

105. *Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of Regions, Stepping up Europe’s 2030 Climate Ambition Investing in a Climate-Neutral Future for the Benefit of our People*, COM (2020) 562 final, 1-2 (Sept. 17, 2020), <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEX:52020DC0562> [<https://perma.cc/GVP9-S7HP>] [hereinafter EU 2030 Climate Plan].

106. *Id.* at 25.

SDGs	Recovery Projects
UNSDG7: Affordable and Clean Energy	Strategic Investment Facility: renewable energy and energy storage technologies; clean hydrogen; batteries; carbon capture and storage; sustainable energy infrastructure; upscaling of hydrogen production and use in EU
UNSDG8: Sustained, Inclusive, and Sustainable Economic Growth	NGEU: 700 000 new green jobs by 2030
UNSDG9: Resilient Infrastructure and Sustainable Industrialization	RRF: €560 billion budget, which conditions funds on a national sustainable recovery plan in accordance with the NGEU
UNSDG11: Sustainable Cities	Strengthened InvestEU (NGEU Pillar 2): Finance installation of 1 million charging points; clean fleet renewals; sustainable transport infrastructure; conditional public investment in transport: requires commitment by industry to invest in cleaner & more sustainable mobility
UNSDG13: Combat Climate Change	The Green New Deal; 2030 Climate Target Plan; Climate Law Regulation Proposal
UNSDG16: Effective and Accountable Institutions	The money raised for the NGEU and the New EU Budget will be channeled through existing EU programs to ensure accountability and transparency of the EU Parliament and Council

The NGEU recovery instrument meets the designated SDG targets for a green recovery. This is not surprising, however, as the EU is focused on sustainability and climate change in general and has pledged to a fully sustainable recovery.¹⁰⁷ This focus makes implementing a green recovery much simpler. Another advantage the EU has over individual countries is that the EU Parliament and Council are the governing bodies for a union of twenty-seven states, each with their own national laws and regulations.¹⁰⁸ Thus, the EC and EU Parliament only have to make funds available for investment to support their Member States, conditioned on sustainability goals. Member States have to propose and enact their own legislation and regulations, through which they will use the EU funds. Therefore, the EU can focus its instrument on a green recovery without outlining specific projects as individual countries must do. Thus, whether the EU sustainability goals will be achieved is dependent on the measures proposed and enacted by its Member States.

D. Nigeria

The Nigerian government has announced its “Bouncing Back: Economic Sustainability Plan,” (The Plan) which proposes to invest 2.3 trillion Naira (USD \$6 billion) in the Nigerian economy through investment

107. European Commission Press Release IP/20/940, The Commission, Europe’s Moment: Repair and Prepare for the next Generation (May 27, 2020), https://ec.europa.eu/commission/presscorner/detail/en/IP_20_940 [<https://perma.cc/KT2T-NGAG>].

108. Publications Office of the EU, European Union, What It Is and What It Does, (February 1, 2020), <https://op.europa.eu/webpub/com/eu-what-it-is/en/> [<https://perma.cc/Z8AJ-U7JU>].

projects in roads, bridges, solar power, and communications technology.¹⁰⁹ It also aims to move production to a local level. The Plan is based on three pillars: The first pillar consists of “Real Sector Measures,” which is a mix of project and policy approaches that focus on job creation across agriculture, food security, housing construction, renewable energy, infrastructure, manufacturing, and the digital economy; the second pillar is “Fiscal and Monetary Measures”; and the third pillar is “Implementation,” which designates an implementation committee and minister for every project to ensure execution and accountability.¹¹⁰

The key green recovery project Nigeria proposes to implement is the Solar Homes Project. This project aims to increase the stock of affordable energy in Nigeria through the installation of solar panels, using a combination of public and private investment, on five million homes by 2023.¹¹¹ This includes connecting 25 million unconnected individuals to the energy grid.¹¹² The Plan estimates this project will cost around N240 billion (±USD \$630 million) and will be implemented by the Federal Ministry of Power, the Rural Electrification Agency, and the Niger Delta Power Holding Company. The government hopes to facilitate the participation of private sector solar power providers in this project through access to low-cost funding by development institutions, like the World Bank. The Solar Homes Project, if successful, will shift Nigeria towards decentralized energy, which would make energy more affordable and efficient, especially in rural communities.¹¹³

Significantly, Nigeria has also scrapped its fuel subsidies.¹¹⁴ The National Gas Expansion Program (NGEP), outlined in the Plan, negates the impact of the scrapped fuel subsidies to a certain extent, however. The NGEP aims to transition Nigeria to a post-oil era through the domestic use of natural gas (LNG).¹¹⁵ LNG is a GHG-emitting fossil fuel, which already powers a large portion of Nigeria’s electricity.¹¹⁶

109. Econ. Sustainability Comm., Gov’t of Nigeria, *Bouncing Back: Nigeria Economic Sustainability Plan* (June 25, 2020), <https://media.premiumtimesng.com/wp-content/files/2020/06/ESC-Plan-compressed-1.pdf> [<https://perma.cc/R2EL-AWF5>] [hereinafter Nigeria Plan].

110. *Id.* at 11.

111. *Id.* at 44.

112. *Id.* at 13.

113. See Daisy Dunne, *The Carbon Brief Profile: Nigeria*, CARBON BRIEF (Aug. 21, 2020), <https://www.carbonbrief.org/the-carbon-brief-profile-nigeria> [<https://perma.cc/CP9W-FS94>].

114. *Id.*

115. See *id.*; see generally Union of Concerned Scientists, *Environmental Impacts of Natural Gas* (June 19, 2014), <https://www.ucsusa.org/resources/environmental-impacts-natural-gas> [<https://perma.cc/KXC4-DVB7>] (discussing the impact of natural gas on the environment).

116. Nigeria Plan, *supra* note 103, at 49-51; see also Dunne, *supra* note 107, (stating that Nigeria sources the majority of its electricity supply from fossil gas).

SDGs	Recovery Projects
UNSDG7: Affordable and Clean Energy	Solar Homes Project: installing solar panels on 5 million homes; connecting 25 million individuals to the energy grid who were not connected before; scrapping gas subsidies
UNSDG8: Sustained, Inclusive, and Sustainable Economic Growth	Solar Homes Project: 250 000 jobs
UNSDG9: Resilient Infrastructure and Sustainable Industrialization	
UNSDG11: Sustainable Cities	
UNSDG13: Combat Climate Change	Solar Homes Project; NGEF to an extent (reduces dependance on oil & gas; only if flaring is reduced)
UNSDG16: Effective and Accountable Institutions	Recovery Plan: Ministerial implementation Committee, chaired by minister of the sector, to ensure execution of projects; COVID-19 response procurement plans, trends opportunities, & contract awards must be published on the Bureau of Public Procurement website within 2 weeks of their finalization

Nigeria's recovery plan does not meet all of the designated SDGs needed for a green recovery, but it does include some sustainability focus, specifically on the energy sector. Nigeria is Africa's largest oil exporter, so its emphasis on solar power and the scrapping of fuel subsidies is quite significant.¹¹⁷ Nigeria also has one of the highest rates of "energy poverty" in the world.¹¹⁸ The World Bank estimates that 47% of Nigerians don't have access to grid electricity, and those who do face regular power cuts.¹¹⁹ Therefore, by investing in solar energy, Nigeria is taking a significant step toward meeting a crucial SDG in the context of its country in the wake of the devastation of the COVID-19 pandemic. It will not only be providing accessible and affordable electricity through the Solar Homes Project but will also create employment opportunities and opportunities for further renewable energy use in the long term.

It is also worth noting that the recovery plan does meet SDG 16 at this preliminary stage. This is a vital SDG for Nigeria to incorporate, not only because Nigeria has had accountability issues with public sector spending in the past, but also because the controversy that already surrounds its pandemic response makes it essential for the Nigerian government to ensure that as many governmental entities as possible incorporate transparency into their COVID-19 strategies and spending.¹²⁰

117. See Dunne, *supra* note 107.

118. *Id.*

119. Press Release, The World Bank, Nigeria to Keep the Lights on and Power its Economy (June 23, 2020), <https://www.worldbank.org/en/news/press-release/2020/06/23/nigeria-to-keep-the-lights-on-and-power-its-economy> [https://perma.cc/HMT3-J5N8].

120. For more information, see Percy Dabang & Angela Ukomadu, *In Nigeria, Looters Target Government Warehouses Stocked with COVID-19 Relief*, REUTERS (Nov. 9, 2020), <https://www.reuters.com/article/us-health-coronavirus-nigeria-food-idUSKBN27POVT> [https://perma.cc/VK2D-3L9P] (describing the recent looting of COVID-19 food warehouses in Nigeria).

The recovery plan does outline an implementation strategy, designating an implementation team for every project, headed by the Minister of the ministry under which the project falls, although this may not be effective in practice. Crucially for SDG 16, Nigeria has another accountability mechanism in its external funding sources: the World Bank and other developmental organizations who are assisting Nigeria with significant fiscal and technical support in its response to COVID-19.¹²¹ These organizations require Nigeria to be accountable and transparent in exchange for the funds.¹²² As a result, the Nigerian government has committed to enhancing its transparency and accountability by placing all of its contract information related to its projects in the public domain. As a part of its funding agreement with the World Bank, the Nigerian government must publish all procurement plans, procurement tender opportunities, and contract awards related to the COVID-19 pandemic response on the Bureau of Public Procurement's (BPP) website within two weeks of their finalization.¹²³

E. South Korea

The South Korean Ministry of Economy and Finance has proposed their COVID-19 recovery package, the Korean New Deal (KND), which pledges to invest KRW 160 trillion (USD \$130 billion) by 2025 in South Korea's economic recovery.¹²⁴ The KND sets out a vision with three prerogatives: to transition South Korea "from a fast follower to a First Mover economy," "from a carbon-dependent to a low-carbon economy," and "from a socially divided to a socially inclusive" economy. It aims to achieve this vision through two policies, the Digital New Deal and the Green New Deal (KGD), and ten key projects spread across those policies. The South Korean government intends to invest KRW 73.4 trillion (USD \$62 billion) by 2025 on the eight KGD projects.¹²⁵ The key focus areas of the KGD are the green transition of infrastructure, promoting low-carbon and decentralized energy, and promoting green industry innovation.¹²⁶ The KND predicts that the KGD will create 319,000 new jobs by 2022 and 659,000 new jobs by 2025.¹²⁷ Key projects under the KGD are the expansion of solar panels and wind turbine use, investment in smart grids and microgrid communities, and targets for an increased number of electric and hydrogen-powered fuel cell electric vehicles.¹²⁸

121. See Bayo Awosemusi & Sunday Esene Osoba, *Advancing Transparency and Accountability in Public Expenditure in a Pandemic Environment*, THE WORLD BANK (Sept. 22, 2020), <https://blogs.worldbank.org/africacan/advancing-transparency-and-accountability-public-expenditure-pandemic-environment> [https://perma.cc/W2VZ-VP7Q].

122. See *id.*

123. *Id.*

124. Ministry Econ. & Fin., Gov't of the Republic of Korea, *National Strategy for a Great Transformation: Korean New Deal* (Aug. 27, 2020), https://english.moef.go.kr/popup/20200826_policyFocus/popup.html [https://perma.cc/MP7X-UQ78].

125. See *id.*

126. *Id.*

127. *Id.*

128. See *id.* at 19; see also Sung-Young Kim et al., *South Korea's Green New Deal Shows the World What a Smart Recovery Looks Like*, THE CONVERSATION (Sept. 9, 2020), <https://>

SDGs	Recovery Projects
UNSDG7: Affordable and Clean Energy	2021 budget: KRW 5.4 trillion for industry, energy, and SME; KGD: Expansion of solar panels and installation of solar panels on 225 000 public buildings; installing smart meters and grids in 5 million apartments; install microgrid communities; reducing and recycling energy in factories; carbon capture and storage
UNSDG8: Sustained, Inclusive, and Sustainable Economic Growth	KND: 1 901 000 jobs by 2025; KGD 659 000 jobs by 2025
UNSDG9: Resilient Infrastructure and Sustainable Industrialization	2021 budget: KRW 5.4 for industry, SME and energy; KRW 3 trillion for R&D; GND: KRW 5.8 trillion will be spent on upgrading old state-run facilities, carbon capture, and storage of carbon emitted from industrial processes
UNSDG11: Sustainable Cities	GND: EVs of 1.13 million EVs and 200 000 hydrogen powered fuel-cell EVs by 2025; 15 000 rapid and 30 000 standard charging units; 450 hydrogen refueling units
UNSDG13: Combat Climate Change	Korean Green New Deal; using LNC as a “bridging” fuel from coal, with the aim of being net-zero by 2050
UNSDG16: Effective and Accountable Institutions	President Moon will chair a monthly KND strategy meeting to monitor the performance of government ministers, and ensure the private sector meets its commitments

The KND has a strong green focus, with over half its proposed investments in a sustainable and low-carbon recovery. It emphasizes renewable energy, which is important for South Korea’s current coal- and nuclear-based electricity system. In 2017, South Korea was the seventh largest emitter of CO₂ globally according to the IEA; thus, South Korea needs to focus on divesting from high-carbon power generation.¹²⁹ Although the KND meets all of the SDGs needed for a green recovery, the South Korean government has been criticized for not going far enough in the KGD. The current ruling party committed to make South Korea carbon neutral by 2050, to stop financing coal companies, to introduce a carbon tax, and to boost the development of renewables in its “Green New Deal” during its election campaign in April 2020.¹³⁰ However, in the proposed KGD, the government only included the development of renewables, omitting its other promises. After announcing its KGD, the government has thus come under fire from environmental activist groups for not meeting President Moon Jae-in’s pledge to make South Korea net-zero by 2050 or to end coal financing.¹³¹

theconversation.com/south-koreas-green-new-deal-shows-the-world-what-a-smart-economic-recovery-looks-like-145032 [https://perma.cc/7AWJ-A2BP].

129. See Josh Smith & Sangmi Cha, *Jobs Come First in South Korea’s Ambitious ‘Green New Deal’ Climate Plan*, REUTERS (June 8, 2020), <https://www.reuters.com/article/us-southkorea-environment-newdeal-analysis-idUSKBN23F0SV> [https://perma.cc/7LPM-VGC7].

130. See *South Korea*, CLIMATE ACTION TRACKER, <https://climateactiontracker.org/countries/south-korea/> [https://perma.cc/9DL7-TKDV] (last updated July 30, 2020) [hereinafter South Korea Climate Action Tracker].

131. See Smith & Cha, *supra* note 123.

Furthermore, the South Korean government, through the South Korean Development Bank, issued a USD \$825 million emergency loan to Doosan Heavy Industries & Construction Co. (Doosan), a builder of coal-fired power plants.¹³² Environmental groups are seeking an injunction to force the government to condition the bailout loan on Doosan moving away from coal and toward renewable energy technology.¹³³ The Climate Action Tracker similarly criticizes the KGD because, although it does provide for the strengthening of hydrogen and electric vehicles, it does not commit to a phase-out timeline for combustion vehicles.¹³⁴ Additionally, the government proposes to rely on LNG to shift the country toward renewable energy.¹³⁵ Critics suggest that what the shift to LNG as a transition power producer means is a green-wrapped “business-as-usual” approach that will provide “cheap electricity for heavy industry behemoths”.¹³⁶ The Climate Action Tracker finds South Korea’s policies and targets under the Paris Agreement to be “highly insufficient,” despite the proposed KGD.¹³⁷

F. United States of America

President Biden has announced a two-step, \$1.9 trillion “American Rescue Plan” that purports to “invest[] in America, creating millions of additional good-paying jobs, combatting the climate crisis, advancing racial equity, and building back better than before.”¹³⁸ On January 20, 2021, President Biden released the “first step” of his plan, which focuses on tackling the pandemic and giving direct financial relief to U.S. citizens.¹³⁹ The first step requires legislation and therefore has to be approved by Congress before it can be implemented.¹⁴⁰ Notably, the first step does not focus on a green recovery; however, on January 27, 2021, President Biden signed the “Executive Order on Tackling the Climate Crisis at Home and Abroad” (Executive Order).¹⁴¹ The Executive Order demonstrates the Biden Administration’s commitment to a green recovery and underlines its plan for the “second step” of the American Rescue Plan, which will include a focus on a sustainable recovery.¹⁴²

132. See Basten Gokkon, *Green Groups Target South Korea’s Bailout of Coal Power Plant Builder*, MONGABAY (Apr. 10, 2020), <https://news.mongabay.com/2020/04/south-korea-doesan-heavy-coal-power-bailout-covid19-indonesia/> [https://perma.cc/36AQ-L2Y3].

133. See *id.*

134. See South Korea Climate Action Tracker, *supra* note 124.

135. See Sam Macdonald, *How Green Is South Korea’s Green New Deal?*, THE DIPLOMAT (Aug. 12, 2020), <https://thediplomat.com/2020/08/how-green-is-south-koreas-green-new-deal/> [https://perma.cc/TDX3-RKVZ].

136. *Id.*

137. See South Korea Climate Action Tracker, *supra* note 124.

138. See Press Brief, The White House, President Biden Announces American Rescue Plan (Jan. 20, 2021), <https://www.whitehouse.gov/briefing-room/legislation/2021/01/20/president-biden-announces-american-rescue-plan/> [https://perma.cc/9YVD-KWWW] [hereinafter American Rescue Plan].

139. See *id.*

140. See *id.*

141. See Exec. Order No. 14008, 86 Fed. Reg. 7619 (Jan. 27, 2021).

142. See American Rescue Plan, *supra* note 132.

The Executive Order consists of two primary parts: to put the climate crisis at the center of U.S. foreign policy and national security and to take a government-wide approach to the climate crisis.¹⁴³ Under the first part, the Executive Order establishes a Special Presidential Envoy for Climate (the Envoy), which will sit on the National Security Council.¹⁴⁴ The Envoy is tasked with pressing for enhanced climate action in the Council.¹⁴⁵ Furthermore, the Executive Order holds that it will begin to develop an NDC under the Paris Agreement.¹⁴⁶

The Executive Order's second part establishes the White House Office of Domestic Climate Policy, which is tasked with coordinating and implementing the President's domestic climate agenda.¹⁴⁷ It also establishes a National Climate Task Force, consisting of leaders from 21 federal agencies, to plan and implement key federal actions to "reduce climate pollution, increase resilience to the impacts of climate change, protect public health, conserve [U.S.] lands, waters, oceans, and biodiversity; deliver environmental justice; and spur well-paying union jobs and economic growth."¹⁴⁸ The second part further includes plans to achieve and facilitate a carbon pollution-free electricity sector by 2035 and clean and zero-emission vehicles for Federal, State, local, and Tribal government fleets, including the U.S. Postal Service.¹⁴⁹ Furthermore, it pauses new oil and gas leases on public land and offshore waters, sets a goal to double offshore wind production by 2030, and directs agency heads to ensure that federal funding is not used to directly subsidize fossil fuels.¹⁵⁰ Notably, the Executive Order also establishes a White House Environmental Justice Inter-agency Group that will develop a strategy to address current and historical environmental injustice and outline clear "performance metrics" to ensure accountability.¹⁵¹

143. See Exec. Order No. 14008, *supra* note 135, Parts 1-2, at 7619, 7622.

144. See *id.* §102 (c), at 7620.

145. See *id.*

146. See *id.* §102 (e).

147. See *id.* §202, at 7622.

148. *Id.* § 203 (b), at 7623.

149. See Exec. Order No. 14008, *supra* note 135, § 205 (b), at 7624.

150. See *id.* § 207-209, at 7624-25.

151. See *id.* § 219, at 7629.

SDGs	Recovery Projects
UNSDG7: Affordable and Clean Energy	Interagency Working Group on the Social Cost of Greenhouse Gases; Federal Clean Electricity & Vehicle Procurement strategy; increase renewable energy production and double offshore wind production by 2030; pausing new oil and natural gas leases; no direct federal funding of fuel subsidies
UNSDG8: Sustained, Inclusive, and Sustainable Economic Growth	White House Environmental Justice Interagency Council; empower workers through rebuilding infrastructure for a sustainable economy by advancing conservation and agriculture and through revitalizing energy communities
UNSDG9: Resilient Infrastructure and Sustainable Industrialization	Rebuild our Infrastructure for a Sustainable Economy: climate pollution reducing federal infrastructure investments, accelerate clean energy; Interagency Working Group on Coal and Power Plant Communities and Economic Revitalization: projects to reduce emissions of GHG and other toxic substances from existing and abandoned infrastructure
UNSDG11: Sustainable Cities	Federal Clean Electricity and Vehicle Procurement strategy: carbon pollution-free electricity sector by 2035 and clean and zero-emission vehicles for Federal, State, local, and Tribal government fleets
UNSDG13: Combat Climate Change	National Climate Task Force; “Whole of Government” approach; reviewing and addressing the previous Administration’s agency actions that are incompatible with combatting climate change
UNSDG16: Effective and Accountable Institutions	“Whole of Government” approach; National Climate Task Force; Environmental Justice Interagency Group; heads of agencies must submit a draft action plan describing their steps to adapt to climate change and publish public annual progress reports; rejoined Paris Agreement

Combatting climate change is at the center of the Biden Administration’s agenda, and, thus, it is no surprise that the Executive Order meets all the SDGs needed for a green recovery. Although President Biden has not formally released the “second step” of his “Rescue America” plan at this time, the Executive Order paves the way for the Biden Administration to incorporate green measures.¹⁵² Furthermore, the Executive Order takes a “whole of government” approach, directing different federal agencies and administrative officials to review and change any practices that facilitate climate change and setting deadlines for those changes.¹⁵³ The “whole of government” approach is notable because it empowers federal agencies other than the traditional environmental and energy agencies, like the Department of Transportation, to implement sustainability standards and strategies.¹⁵⁴ Significantly, President Biden has also directed the heads of all federal agencies to review existing regulations, orders, and policies promulgated, issued, or adopted between January 20, 2017, and January 20, 2021.¹⁵⁵ This is noteworthy because the previous Administration

152. See Ella Nilsen, *Biden’s “All of Government” Plan for Climate, Explained*, ECOSYSTEM MARKETPLACE (Jan. 27, 2021), <https://www.ecosystemmarketplace.com/articles/bidens-all-of-government-plan-for-climate-explained/> [<https://perma.cc/T43Y-7ZKB>].

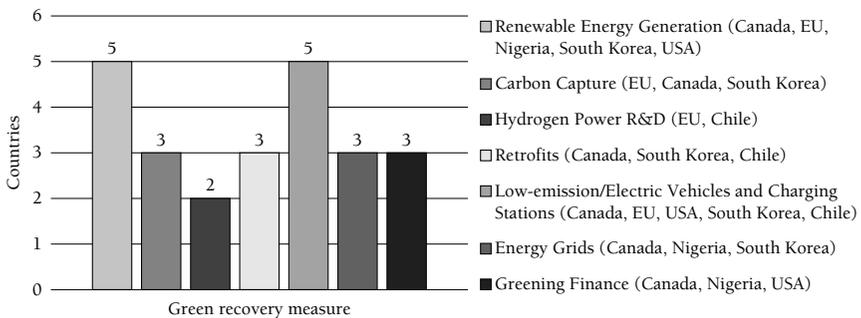
153. See generally, Exec. Order No. 14008, *supra* note 135.

154. See Nilsen, *supra* note 146.

155. See Exec. Order No. 13990, 86 Fed. Reg. 7037, 7037, §2(a) (Jan. 20, 2021).

deescalated, and sometimes reversed, climate action regulations and policies.¹⁵⁶ The review therefore provides agencies with the opportunity to amend any legal instruments that do not conform with combatting climate change. The Biden Administration's emphasis on climate change is important because 12.67% of global emissions are attributable to the U.S., which means that reducing the U.S.'s GHG emissions can have a large effect on lowering global emissions.¹⁵⁷ As of June 2020, the Climate Action Tracker holds that the U.S.'s climate response is critically insufficient.¹⁵⁸

IV. Trends in Green Response Measures



It is worth noting that the data set consists of six countries and only reflects the recovery measures they have proposed that attempt to meet the climate change SDGs. Unsurprisingly, most of the countries have recovery measures focused on renewable energy and low-emission transport. This could be because of the nature of the data set: To mitigate climate change, countries have to lower their emissions, and the most efficient and effective way to do that is to transition from fossil fuel use. The fact that Nigeria and Canada have included green financing measures is noteworthy because both countries have oil-dependent economies. Placing conditions on financing may potentially motivate accountability and force a transition to more renewable power generation in these countries. Significantly, the U.S. also includes a plan to eliminate federal government fuel subsidies, which is noteworthy because the previous Administration relaxed environmental standards and supported the oil and gas industries.¹⁵⁹ Similarly,

156. See Tyler Clevenger & Dan Lashof, *7 Ways the Biden Administration Can Reverse Climate Rollbacks*, WORLD RES. INST. (Jan. 19, 2021), <https://www.wri.org/blog/2021/01/7-ways-biden-administration-can-reverse-climate-rollbacks> [<https://perma.cc/EZ6W-D77T>] (discussing the Trump Administration's rollbacks of environmental safeguards and how the Biden Administration can "roll-forward" climate change policies).

157. See Johannes Friedrich et al., *This Interactive Chart Shows Changes in the World's Top 10 Emitters*, WORLD RES. INST. (Dec. 10, 2020), <https://www.wri.org/blog/2020/12/interactive-chart-top-emitters> [<https://perma.cc/HQ4Y-CUXC>].

158. See USA, CLIMATE ACTION TRACKER, <https://climateactiontracker.org/countries/usa/fair-share/> [<https://perma.cc/2KAZ-22LF>] (last updated July 30, 2020).

159. See Exec. Order No. 14008, *supra* note 135, §209, at 7625; USA, CLIMATE ACTION TRACKER, <https://climateactiontracker.org/countries/usa/> [<https://perma.cc/N3XP-BHXL>] (last updated July 30, 2020).

Canada, Nigeria, and South Korea have notably included energy grids in their recovery plans. Smart grids centralize electricity distribution and thus make electricity more affordable and efficient. For Canada and Nigeria, which are large countries, this will enable efficient and affordable electricity transmission to rural areas where communities are off-the-grid; for South Korea, which has exorbitant electricity costs, it will lower the cost of electricity in general.

It is also worth noting that Chile is one of two countries that has included hydrogen power in its strategy. The only other “country” that has included hydrogen as a renewable energy source is the EU. Hydrogen energy production is still at the beginning of its R&D phase, making it an expensive goal to pursue, especially as a transition energy source.¹⁶⁰ The EU, however, has the capacity and the capability to venture into new modes of renewable energy production. Chile’s proposal to develop and implement the use of hydrogen energy, not only for Chile itself but to build an international supply system, is therefore significant. Usually developing countries, such as Nigeria, that are transitioning from high-carbon-emitting energy production will invest in solar or wind energy. The success of the green hydrogen strategy would result in a major boost in Chile’s economy and its position in the world if it is implemented successfully.

Overall, all six countries have adopted varying levels of the “best practices” identified by studies, but only to the extent that their countries are capable and with a focus on the practices that are most relevant to their particular environment.

V. Challenges for Countries’ “Green” Responses

This Note’s analysis of the six countries above demonstrates, to a certain extent, the shift in perspective on sustainability and a green economic recovery globally. After the 2008 GFC, not many countries made sustainability a priority in their recovery measures. In contrast, numerous countries have included at least some sustainability focus in their responses to the COVID-19 pandemic. This shift in approach could be due to the adoption of the SDGs and the Paris Agreement, which occurred after the GFC recovery period. As this report illustrates, the SDGs have been a successful framework to some extent because they have noticeably influenced countries’ policy responses to the pandemic in that the structure of the countries’ plans designate measures to SDG-like categories such as healthcare, battling inequality, and fixing infrastructure. Furthermore, even if the countries have not fully incorporated climate-focused SDGs into their recovery plans, the plans do show an awareness of the need for “green” approaches in their policies.

The SDGs’ status as “soft law” is therefore ostensibly less relevant in this context as countries’ leaders incorporate the SDGs either out of a belief

160. Dr. Thomas Hirse, *R&D on Hydrogen Technologies: Climate-Compatible Transition with a Green Hydrogen Tailwind*, CMS, <https://cms.law/en/deu/insight/hydrogen/r-d-on-hydrogen-technologies> [<https://perma.cc/E9HF-QR6D>] (last visited April 10, 2021).

in the need for sustainability, societal pressure, or to maintain their international reputation. The shortcomings of soft law are still apparent, however. The countries' leaders must still take the initiative to incorporate the SDGs and, even if they do, there are no legal enforcement mechanisms to ensure they keep to their sustainability promises. This drawback is particularly important in the COVID-19 response context. Although governments announce their plans for a sustainable economic recovery under the SDGs, they are not bound to follow through and meet the targets outlined in their plans. A binding commitment, like a treaty, would be more effective because a derogating country could be held legally accountable if necessary. This raises the concern of implementing the recovery plans. The five countries studied have each proposed a recovery plan and subsequent strategies to incorporate the SDGs into their individual countries' recoveries, but that does not necessarily mean that these measures will be effectively implemented. The investment plans are not legal instruments but strategies of what the country plans to invest in and are therefore not legally enforceable. Countries with stronger, more focused accountability structures that have regulations to ensure cooperation are more likely to successfully implement their sustainability projects than those without. It is less likely that countries where government institutions are not transparent or accountable will achieve the goals outlined in their plans.

Significantly, however, NGOs, international organizations, and civil society members have been a check on government accountability during the development of countries' recovery plans. They have pressured governments to incorporate sustainability into their plans, using conditional funding, legal mechanisms (including injunctions), and public shaming to do so. Accordingly, these groups act as an external enforcement mechanism for the sustainability aspects of a country's recovery plan by holding their leaders accountable both legally and in the courts of public opinion.

Conclusion

A green recovery to the COVID-19 pandemic remains the most effective tool to ensure a global sustainable future and to meet the Paris Agreement target of limiting global warming to below 1.5°C by 2030. The SDGs act as valuable guidelines for countries to implement greener policies, especially in the context of pandemic recovery programs. As a framework for each country's own sustainability targets, the SDGs continue to operate as an important mechanism to interact with and guide national and local policy in the movement towards sustainability.

